(CLEAN VERSION OF CLAIMS)

CLAIMS

I Claim:

1. A system for handoff comprising:
    a. at least one tethered device with power line communication circuitry tethered to a roadway luminaire, and
    b. said tethered device has a means to perform a handoff, whereby an untethered device is reassigned from a first base station to a second base station.

6. The system for handoff in accordance with Claim 1, wherein said first base station or said second base station is connected to a communication network whereby said communication network may be an individual or plurality of other bridge devices, a wireless network, a power line communication network, an ATM network, an Ethernet network, a Gigabit Ethernet network, a PCI-Express network, a fiber optics network, a local area loop, a cellular network, a home power line network, a digital subscriber line network, a cable modem network, a cable television network, a copper line network, a plain old telephone network, a packet based network, an 802.11 network, an 802.16 network, an 802.20 network, a Bluetooth network, an ultra wideband network, or other similar network creating a mesh network.

7. The system for handoff in accordance with Claim 1, wherein said means to perform a handoff comprising:
    a. determining signal strength data with respect to untethered devices,
    b. evaluating said data in relation to a requirement, and
    c. reassigning said untethered device when said requirement is met, whereby said untethered device is reassigned from said first base station to said second base station.

8. The system in accordance with Claim 1, wherein said tethered device is coupled to a physical interface whereby said physical interface is a photo detector socket, a light bulb socket, an electrical outlet, an enclosure attached inductively around a power transmission line, an enclosure entirely housed in a sunlight photo detector attached to a photo detector socket on a utility pole or street light, a means to interface spliced into a light fixture, a

means to interface spliced into a power transformer, or a means to interface spliced into an electric meter.

9. The system for handoff in accordance with Claim 1, wherein said untethered device communicates using either wireless, infrared, ultraviolet, laser, visible light, magnetic, ultrasonic, acoustic, impulse, ultra wideband, electromagnetic energy or a combination of these communication methods, and said tethered device communicates using either power line, wireless, infrared, ultraviolet, laser, visible light, magnetic, ultrasonic, acoustic, impulse, ultra wideband, electromagnetic energy or a combination of these communication methods, and said means to perform a handoff is according to IEEE 802.16, IEEE 802.20, IEEE 802.15, IEEE 802.11 including IEEE 802.11e, ultra-wideband, GSM, CDMA, EDGE, GPRS, TDMA, WCDMA, CDMA2000, 3G, 4G, OFDM, flash OFDM specification or according to another communication protocol supporting handoff.

10. The system for handoff in accordance with Claim 1, wherein said tethered or said untethered device can also communicate using a method or protocol that does not support handoff.

12. The system for handoff in accordance with Claim 1, wherein said tethered device can repeat data from other tethered devices or other untethered devices associated with the same communication network or a different communication network.

13. The system for handoff in accordance with Claim 1, wherein said tethered device can track and locate untethered devices including mobile phones, monetary instruments, and individuals, and based on this real time positioning securely broadcast multimedia content whereby said untethered device stores the content according to digital rights management.

14. The system for handoff in accordance with Claim 1, wherein said tethered device does not integrate a receiver or does not integrate a transmitter whereby said receiver or said transmitter is located in a different location such that said tethered device uses a co-located receiver or a co-located transmitter over said communication network, or said mesh communication network, or said power line communication network as if said receiver or transmitter was located in said tethered device.

23. A device for handoff comprising:
    a. a roadway luminaire,
    b. a communication circuitry,
    c. a physical interface of said roadway luminaire, wherein said physical interface provides power to said communication circuitry, and
    d. a means to request a handoff using said communication circuitry.

24. The roadway luminaire in accordance with Claim 23, wherein said roadway luminaire and said physical interface of said roadway luminaire may be substituted by a light bulb socket, a means to interface spliced into a light fixture, a means to interface attached around or spliced into a power transmission line, a means to interface spliced into a power transformer, or a means to interface spliced into an electric meter.

25. The device for handoff in accordance with Claim 24, wherein said means to perform a handoff uses power line communications through said physical interface by said communication circuitry, and said physical interface and said roadway luminaire may be substituted by an electrical outlet.

26. The device for handoff in accordance with Claim 23, wherein said communication circuitry communicates using either power line, wireless, infrared, ultraviolet, laser, visible light, magnetic, ultrasonic, acoustic, impulse, ultra wideband, electromagnetic energy or a combination of these communication methods, and said means to perform a handoff is according to GSM, CDMA, EDGE, GPRS, TDMA, WCDMA, CDMA2000, OFDM, flash OFDM, 3G, 4G, IEEE 802.16, IEEE 802.20, IEEE 802.15, or IEEE 802.11 specification including IEEE 802.11e or according to another communication protocol supporting handoff.

27. The system for handoff in accordance with Claim 8, wherein said means to perform a handoff uses power line communications through said physical interface by said tethered device.

28. The system for handoff in accordance with Claim 1, wherein said tethered device is said first base station and a different tethered device is said second base station.

29. The roadway luminaire in accordance with Claim 1, wherein said roadway luminaire may be substituted by an electric outlet, light bulb fixture, a means to interface spliced into a light fixture, a means to interface attached around or spliced into a power transmission line, a means to interface spliced into a power transformer, or a means to interface spliced into an electric meter.

30. The roadway luminaire in accordance with Claim 1 comprising:

a. a lamp,
b. a reflector,
c. a ballast,
d. wiring,
e. a diffuser
f. a physical interface, wherein said physical interface is a socket that can accept a removable sunlight photo detector device with a means to control the luminescence of said roadway luminaire,
g. a mast, wherein said mast holds said lamp, said reflector, said ballast, wiring, said diffuser, and said socket, and
h. said mast is attached along side a road so as to provide luminescence to the road.

31. The roadway luminaire in accordance with Claim 23 comprising:

a. a lamp,
b. a reflector,
c. a ballast,
d. wiring,
e. a diffuser
f. said physical interface is a socket, wherein said socket can accept a removable sunlight photo detector device with a means to control the luminescence of said roadway luminaire,
g. a mast, wherein said mast holds said lamp, said reflector, said ballast, wiring, said diffuser, and said socket, and
h. said mast is attached along side a road so as to provide luminescence to the road.

32. A method of handoff of a device tethered to and powered by a roadway luminaire comprising:

a. determining signal strength data with respect to an untethered devices,
b. evaluating said data in relation to a requirement, and
c. reassigning said untethered device using power line communications when said requirement is met, whereby said untethered device is reassigned from a first base station tethered to a roadway luminaire to a second base station.

33. The method of handoff of Claim 32 further comprising:

a. a means for adjusting the power output of an untethered device in relationship to the ideal signal strength, and
b. substituting said means for determining signal strength data for a means for determining positioning data of said untethered devices.